



Oh, that explains it



Michigan Merit Curriculum High School Graduation Requirements

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COURSE/CREDIT CONTENT EXPECTATIONS

The Michigan Department of Education has developed and the State Board of Education has approved *High School Content Expectations (HSCE)* that outline what students should know and be able to do in English language arts, mathematics and science. Content Expectations for social studies are currently in the development process. These expectations serve as the foundation for the development of more specific Course/Credit Content Expectations that outline what students should know and be able to do for each credit required in the Michigan Merit Curriculum.

The Michigan Merit Curriculum Course/Credit Content Expectations and Guidelines will assist school districts and teachers to align their current curriculum, guide what is taught and assessed to earn credit, and provide parents with a tool to gauge student progress. These expectations also will serve as the basis to develop various questions included in the Michigan Merit Exam.

In the future, the Michigan Department of Education will be developing a variety of companion documents to support the implementation of these credits.

MATHEMATICS

What the Michigan Merit Curriculum Law Says

Sec. 1278a(a)(i) The board of a school district or board of directors of a public school academy shall not award a high school diploma to a pupil unless the pupil has successfully completed at least 4 credits in mathematics that are aligned with subject area content expectations developed by the Michigan Department of Education and approved by the State Board of Education before graduating from high school.

Students must complete at least Algebra I, Geometry, and Algebra II, or an integrated sequence of this course content that consists of 3 credits, and an additional mathematics credit, such as Trigonometry, Statistics, Pre-calculus, Calculus, Applied Math, Accounting, Business Math, or a retake of Algebra II. Each pupil must successfully complete at least 1 mathematics course during his or her final year of high school enrollment.

Sec. 1278b(5)(f) The mathematics credit requirements may be modified as part of a personal curriculum only after the pupil has successfully completed at least 2-1/2 credits including Algebra I, Geometry and 1 semester of Algebra II or the same content as 1 semester of Algebra II and only if the pupil successfully completes at least 3-1/2 total credits of the mathematics credits required under that section before completing high school including 1 mathematics course during his or her final year of high school. Under a personal curriculum, a student may elect to complete the same content as Algebra II over 2 years, with a credit awarded for each of those 2 years.

Background Information

The Mathematics High School Content Expectations (HSCE) are organized in four strands, 14 standards, and 157 expectations which students are expected to meet by the end of high school. The overarching goal for the HSCE is for students to exhibit the "habits of mind" that will result in the Components of Mathematical Proficiency listed in the Successful Post-Secondary Engagement chart on page four of the HSCE document available on the Michigan Department of Education's high school web site at www.michigan.gov/highschool. These dispositions are developed throughout the four years of high school mathematics instruction by building, refining, applying, and extending the knowledge, skills, and strategies incorporated in the 14 standards and 157 expectations. The Algebra I, Geometry, and Algebra II Course/Credit requirements define the expectations that must be met for the Algebra I, Geometry, and Algebra II credits required for graduation. Course/Credit requirement documents for Pre-calculus and Statistics define the expectations for earning additional optional credits in these areas. A 4th mathematics or math-related credit is also required for graduation.

What Research Says

This document is intended to provide general guidance. Due to the complexity of the law, policies and guidance will continue to evolve. For specific information regarding the law, please refer to Public Acts 123 and 124 of 2006. 11/15/06

Studies show students taking four years of challenging math including Algebra I, Geometry, Algebra II, and one additional higher-level course are more likely to succeed in college and the workplace. Eighty-four percent of individuals who currently hold highly paid professional jobs have taken Algebra II or higher as their last high school math course. In Michigan, nearly half of all high school graduates did not take four years of challenging math including Algebra II.

Questions & Answers

1. Q: If students take Algebra I over two years can they earn credit for both years?

A: The law implies all graduation requirements other than Algebra II, regardless of the length of time a student spends in a classroom, should count as one credit. In other words, students should earn one credit for Algebra I when they meet the credit requirements outlined in the Algebra I course/credit expectations. However, a district may also allow students to earn their 4th mathematics credit by taking classes that would support meeting the Algebra I expectations such as Algebra Concepts, Pre-algebra, or other “math-related” course. The 4th math credit must be aligned with the math content expectations. Local districts have the flexibility to decide the percent alignment necessary for the 4th mathematics or math-related credit.

2. Q: Will it still be possible for our high school students to take Pre-algebra for high school credit?

A: Yes, if a district determines Pre- Algebra, Algebra Concepts or other courses meet their 4th mathematics or math-related credit requirement, the district may decide to give students credit. However, students beginning their high school careers with Pre-algebra may have difficulty in meeting the requirements for Algebra I, Geometry, and Algebra II in four years without some additional mathematics support.

3. Q: If a student is not successful in completing Algebra II the first semester and completes the mathematics requirements through an alternative approach such as CTE, does this mean that the student will be allowed to graduate with three and one-half credits of Mathematics, rather than the required four credits?

A: If the district determines that the student has fulfilled all the Algebra II content expectations through an alternative approach, the district can give the student the full credit. If the student has not met the Algebra II requirements, the student and his/her parents would need to request a personal curriculum modification.

4. Q: If a student has taken Algebra I, Geometry, Algebra II, and Pre-calculus prior to the senior year, is the student still required to take Math in the senior year?

A: Yes. The requirement is that a student must earn a mathematics or math-related credit in the final year of high school. Based on the options listed in the law for possible 4th credits in mathematics, this requirement can be met by taking either a mathematics course or a math-related course. Guidance is being developed to help schools designate the classes that are math-related, but it is the discretion of the local district to determine what credits would count as “math-related”.

5. Q: Does the required 4th credit in math have to be in math beyond Algebra II (for example, Pre-calculus or Trigonometry)?

A: No. The law requires a 4th mathematics credit aligned with the HSCE, but provides local districts with the flexibility to determine what counts for the 4th mathematics credit. The credit could be in a basic or an applied math area, such as Business Math, Accounting, Consumer Math, Applied Math, General Math, Pre-algebra, etc.

6. Q: If a student has to take a math-related class in the final year, doesn't that preclude participation in relevant senior year experiences like a practicum, independent study, or cooperative employment?

A: No. A practicum, independent study, or cooperative employment experience can be structured to include math-related elements and fulfill the requirement for a 4th credit in mathematics aligned with the HSCE as determined by the district.